Title (en)

HIGH-STRENGTH HOT-DIP GALVANIZED STEEL SHEET AND MANUFACTURING METHOD THEREFOR

Title (de)

HOCHFESTES FEUERVERZINKTES STAHLBLECH UND HERSTELLUNGSVERFAHREN DAFÜR

Title (fr)

TÔLE EN ACIER GALVANISÉ À CHAUD HAUTEMENT RÉSISTANTE, ET PROCÉDÉ DE FABRICATION DE CELLE-CI

Publication

EP 3901293 A1 20211027 (EN)

Application

EP 19913827 A 20191018

Priority

- JP 2019013074 A 20190129
- JP 2019041005 W 20191018

Abstract (en)

An object is to provide a high-strength hot-dip galvanized steel sheet that is suitable as a high-strength steel sheet for an automotive energy absorbing member and that has a tensile strength (TS) of 980 MPa or more and excellent fracture resistance characteristics in a crash and to provide a manufacturing method therefor.The high-strength hot-dip galvanized steel sheet, which includes a hot-dip galvanized coating layer on a surface of the steel sheet, has a component composition containing, in mass%, C: 0.07% to 0.20%, Si: 0.1% to 2.0%, Mn: 2.0% to 3.5%, P: 0.05% or less, S: 0.05% or less, and sol. Al: 0.005% to 0.1%, with the balance being Fe and incidental impurities; and has a steel microstructure containing, in area fraction, 60% or less of ferrite, 40% or more of tempered martensite, and 10% or less of fresh martensite and having a void number density of 1,500/mm² or less in a bent portion in the VDA bending test.

IPC 8 full level

C21D 9/46 (2006.01); **C22C 38/00** (2006.01); **C22C 38/60** (2006.01)

CPC (source: EP KR US)

B32B 15/013 (2013.01 - US); **C21D 1/185** (2013.01 - EP); **C21D 1/19** (2013.01 - EP); **C21D 1/25** (2013.01 - EP); **C21D 6/004** (2013.01 - US); **C21D 6/005** (2013.01 - EP US); **C21D 6/008** (2013.01 - US); **C21D 8/0205** (2013.01 - US); **C21D 8/0226** (2013.01 - KR US); **C21D 8/0236** (2013.01 - KR US); **C21D 8/0263** (2013.01 - US); **C21D 8/0273** (2013.01 - KR); **C21D 8/0426** (2013.01 - EP); **C21D 8/0447** (2013.01 - EP); **C21D 9/46** (2013.01 - KR US); **C21D 9/48** (2013.01 - EP); **C22C 38/001** (2013.01 - US); **C22C 38/002** (2013.01 - EP US); **C22C 38/005** (2013.01 - EP US); **C22C 38/02** (2013.01 - EP KR US); **C22C 38/04** (2013.01 - EP KR); **C22C 38/06** (2013.01 - US); **C22C 38/16** (2013.01 - EP); **C22C 38/22** (2013.01 - EP); **C22C 38/28** (2013.01 - EP); **C22C 38/34** (2013.01 - EP); **C22C 38/38** (2013.01 - EP KR); **C22C 38/42** (2013.01 - US); **C22C 38/44** (2013.01 - US); **C22C 38/46** (2013.01 - US); **C22C 38/48** (2013.01 - US); **C22C 38/50** (2013.01 - EP US); **C22C 38/54** (2013.01 - US); **C22C 38/58** (2013.01 - EP US); **C22C 38/60** (2013.01 - KR); **C23C 2/02** (2013.01 - EP KR US); **C23C 2/0224** (2022.08 - EP KR US); **C23C 2/06** (2013.01 - EP KR US); **C23C 2/28** (2013.01 - EP KR US); **C23C 2/40** (2013.01 - EP US); C21D 2211/001 (2013.01 - US); C21D 2211/005 (2013.01 - EP KR US); C21D 2211/008 (2013.01 - EP KR US)

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